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10/018,757	03/20/2002	Bernard Aspar	2541-000011	2780

7590

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Harness Dickey & Pierce  
P O Box 828  
Bloomfield Hills, MI 48303

EXAMINER

SCHILLINGER, LAURA M

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/018,757

Applicant(s)

ASPAR ET AL.

Examiner

Laura M Schillinger

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Usenko et al ('829).

In reference to claim 21, Usenko teaches a process comprising:

The implantation of gaseous compounds in the substrate to make a layer of micro-cavities at a depth from the plane face corresponding to the thickness of the required thin film, the gaseous compounds being implanted under conditions that could weaken the substrate at the layer of micro-cavities (Col.4, lines: 1-25 and Col.2, lines: 40-50); and

Partial or total separation of the thin film from the rest of the substrate, this separation comprising a step in which thermal energy is added and pressure is applied to the plane face (Col.2, lines: 50-65).

In reference to claim 22, Usenko teaches wherein the pressure is a gas pressure (Abs., lines: 1-15).



Art Unit: 2813

In reference to claim 23, Usenko teaches wherein the pressure is a mechanical pressure (Abs., lines: 1-15).

In reference to claim 24, Usenko teaches wherein the mechanical pressure is generated by a piston (Col.7, lines: 10-25).

In reference to claim 25, Usenko teaches wherein the pressure is applied locally on the plane face (Fig.13A (33)).

In reference to claim 26, Usenko teaches wherein the pressure is applied uniformly on the plane face (Fig.14A (142)).

In reference to claim 27, Usenko teaches also comprising bonding of a thickener onto the plane face, after implantation of the gaseous compounds (Col.6, lines: 45-55).

In reference to claim 28, Usenko teaches wherein the thickener is composed of water (Col.6, lines: 45-55).

In reference to claim 29, Usenko teaches wherein the wafer is bonded by molecular bonding with the plane face (Col.2, lines: 45-50).



Art Unit: 2813

In reference to claim 30, Usenko teaches wherein the thickener is formed by deposition of one or several materials 9Col.4, lines: 1-15).

In reference to claim 31, Usenko teaches wherein the pressure is applied though the thickener (Col.4, lines: 1-15).

In reference to claim 32, Usenko teaches wherein the pressure is adjusted during the coalescence of at least part of the micro-cavities, to remain slightly above a pressure called the limiting pressure, below which blisters appear on the place face above which blisters do not appear on the plane face (Col.4, lines: 24-35).

In reference to claim 33, Usenko teaches wherein coalescence is performed such that the thin film is separated form the rest of the substrate by pulling them apart (Col.7, lines: 10-25).

In reference to claim 34, Usenko teaches wherein the thin film is separated from the rest of the substrate by application of a heat treatment and optionally by mechanical forces (Col.6, lines: 10-30).

In reference to claim 35, Usenko teaches wherein the substrate used as the initial substrate is a substrate that has already been used to produce a thin film according to the process (Col.4, lines: 1-13).

Art Unit: 2813

In reference to claim 36, Usenko teaches wherein the previously used substrate is polished to provide a new face plane (Col.4, lines: 1-15).

In reference to claim 37, Usenko teaches wherein the substrate supports one or several homogeneous and/or heterogeneous layers on the side having the plane face (Col.4, lines: 1-13).

In reference to claim 38, Usenko teaches wherein the substrate comprises a semiconductor material at least one the side having the plane face (Col.4, lines: 15-25).

In reference to claim 39, Usenko teaches wherein the substrate comprises all or part of at least one electronic device and/or at least one electro-optical device on the side having the plane face (Col.3, lines: 1-10).

In reference to claim 40, Usenko teaches wherein the separation of the thin film is delayed by the application of an additional step that consists of applying an additional pressure onto the thin film (Col.7, lines: 15-25)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (703) 308-6425.

The examiner can normally be reached on M-T, R-F 7:00-5:00.


Art Unit: 2813

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead, Jr. can be reached on (703) 308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

LMS

May 2, 2003

  
CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800